List of Equipment –Research centre

S.No	Name of the Equipment	Equipment Photograph	Application of the Equipment
1	Autoclave		Autoclaves are sterilizers which works on the principle of moist heat
2	Bomb Calorimeter		A bomb calorimeter is a used to measure the heat of combustion of a particular reaction.
3	B.O.D Incubator		Used to testing Biological Oxygen Demand
4	Cooling Centrifuge		Cooling Centrifuge is extensively used in isolating and separating suspensions under the cooling mechanism to maintain the uniform temperature throughout the operation of the sample.

5	Distillation Unit for Water		To purify water for research purpose in the laboratory.
6	Flame photometry		This relies on the principle that an alkali metal salt drawn into a non-luminous flame will be ionise absorb energy from the flame and then emit light of a characteristic wavelength as the excited atoms decay to the unexcited ground state.
7	Gas - Chromatography		Gas Chromatography is used extensively in pharmaceutical scienceS and in research laboratories

8	Hot Air Oven		Worked under the principle of dry heat. Used to Sterilize Glassware and utensils.
9	Hot Plate		In laboratory settings, hot plates are generally used to heat glassware and its contents. Some hot plates also contain a magnetic stirrer, allowing the heated liquid to be stirred automatically.
10	H.P.L.C		It works on the principle of hydrophobic interactions . The main purposes for using HPLC are for identifying the individual components of the mixture.

11	Incubator		An incubator is a device used to grow and maintain microbiologica l cultures under required constant temperatures.
12	Laminar Air Flow Chamber		The principle of **laminar flow cabinet** is to achieve particle free working environment inside and protect the work from cross contamination by any contaminants out side. Desined to create a particle free working environment and provide product protection.
13	Microtome		The tissue is can cut in the microtome at thicknesses varying from 2 to 50 µm. From there the tissue can be mounted on a microscope slide, stained with appropriate aqueous dye(s) after prior removal of the paraffin, and examined using a light microscope.

14	Micro wave oven		The commonly used frequency is roughly 2,500 MHz(2.5GHz).A microwave oven uses microwaves which are basically radiowaves.
15	Muffle Furnace		A muffle furnace in which the subject material is isolated from the fuel and all of the products of combustion including gases and flying ash.
16	Nephelometer		A nephalometer is an instrument for measuring concentration of suspended particulates in liquid or gas colloid.A nephalometer measures suspended particles by employing a light beam and a light detector set to one side of the source beam.
17	PCR		Working principle of PCR is a chain reaction , a small fragment of the DNA section of interest needs to be identified which serves as the template for producing the primers that initiates the reaction .One DNA molecule is used to

			produce two copies , then four, then eight and so forth.
18	Polarography		The principle of polarogaphy is the study of solutions or of electrode processes by means of electrolysis with two electrodes , one polarizable and one unpolarizable , the former formed by mercury regularly dropping from a capillary tube.
19	Refrigerator		A refrigerator work on the principle of cooling through evaporation. Used in research laboratories to preserve Microbial cultures To preserve thermo sensitive chemicals
20	Rota vapor		A rotary evaporator (or rotavap/rotovap) is a device used in chemical laboratories for the efficient and gentle removal of solventsfrom samples by evaporation.

21	Silar coating system with stirrer		SILAR coating system has designed to automate the entire process to avoid operator fatigue.
22	Tissue Culture Lab		To grow plants in artificial medium by maintaining constant temperature, humidity at sterile conditions.
23	Ultra interferometer		The principle of interferometer is based on standing –wave detection This technique is used to measure small displacements, refractive index changes and surface irregularities.
24	Water bath		Water bath is laboratory equipment made from a container filled with heated water. It is used to incubate samples in water at a constant temperature over a long period of time.